

- (b) first, second and third codecs respectively, at said first, second and third locations, [for] configured to compress[ing] said AV signals and decompress[ing said] compressed AV signals[, each of said codecs in communication with said AV path]; and
- (c) an AV signal switch[er] at said third location[, in communication with said third codec and said AV path, for receiving and routing said] operable to route compressed AV signals, destined to an other location [other than said third location] if said AV signals are intended to be processed at] to said other location[, and arranged to communicate with said third codec, such that images of said first participant, compressed by said first codec and routed to said second location via said third location, are not] without said compressed signals being decompressed by said third codec.
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57. The teleconferencing system of claim 55, where in the video image and spoken audio of said first participant routed to said second location, via said third location, can be reproduced at the workstations of both said first and second participants.

58. The teleconferencing system of claim 55, wherein said AV path includes dedicated links between said first and third locations and between said second and third locations.

59. The teleconferencing system of claim 55, wherein said AV path includes dial-up connections between said first and third locations and between said second and third locations.

60. The teleconferencing system of claim 55, wherein said AV path supports both dial-up connections and dedicated links between said first and third locations and between said third and second locations.

61. The teleconferencing system of claim 60, wherein said AV path includes a dial-up connection between said first and third locations and a dedicated link between said third and second locations.

62. (Once Amended) The teleconferencing system of claim 55, further comprising a video mosaic generator[, in communication with said AV path,] for combining the captured images of [a] said first and second participants into a mosaic image for reproduction at least one workstation.

63. (Twice Amended) The teleconferencing system of claim 62, further comprising means[, in communication with said AV path,] for combining a portion of said mosaic image with a captured image of [another of] said third participant[s] to generate a composite mosaic image of the captured images of said three participants, and wherein said composite mosaic image can be reproduced at the workstation of at least one of said participants.

64. (Twice Amended) The teleconferencing system of claim 55, further comprising an audio summer, in communication with said AV path, for receiving the captured audio of said

[a] first, second and third participants and combining only the received audio of the second and third participants into an audio sum for reproduction at the workstation of said first participant.

65. (Twice Amended) The teleconferencing system of claim 64, further comprising:

(a) means[, in communication with said AV path,] for combining a part of said audio sum with the captured audio of another of said participants to generate a composite audio sum for reproduction at the workstation of at least one of said participants.

66. (Twice Amended) The teleconferencing system of claim 55 further comprising:

(a) at least one signal router for routing at least said AV signals among said participant's workstations [in such a way] so as to optimize the carrying of AV signals between said workstations.

67. (Twice Amended) The teleconferencing system of claim 66, wherein said router optimizes said signal routing based on either the actual or the anticipated state of said AV path.

71. The teleconferencing system of claim 55, wherein said AV path includes at least one trunk and [at least one codec] associated [therewith] codec.

187. (Once Amended) The teleconferencing system of claim 55, further comprising:

(a) a data conference manager for managing a data conference[, during which shared data is [can be shared among] displayed on the monitors of a plurality of said [participants and displayed on the monitors of their respective] workstations[, and for managing said videoconference by utilizing a data network operating system and data network protocol of said first network]; and wherein

[[b) an AV conference manager in communication with said data conference manager and said second network, for managing] a videoconference, during which the video image and spoken audio of one of said participants [can be] are reproduced at the workstation of another of said participants, is managed by utilizing [said] a data network operating system and a data network protocol of said first network.

188. (Once Amended) The teleconferencing system of claim 187, further comprising a [distributed] video mosaic generator[, in communication with said AV path,] for combining at least a portion of [said mosaic image with a] captured images of [a third] said first and second participants to generate a [distributed] mosaic image [of the captured images of said first, second and third participants] for reproduction at least one workstation.

189. (Once Amended) The teleconferencing system of claim 188, further comprising a close-up selector for selecting the image of one of the participants in said [distributed]

mosaic image and replacing said [distributed] mosaic image with the image of said selected image.

190. (Once Amended) The teleconferencing system of claim 188, further comprising an audio summer, in communication with said AV path, for receiving the captured audio of [a] said first, second and third participants and combining/only the received audio of the second and third participants into an audio sum for reproduction at the workstation of said first participant.

191. (Once Amended) The teleconferencing system of claim 190 wherein the AV reproduction capabilities of at least the workstation of the first participant includes a plurality of speakers, the system further comprising:

(a.) \_\_\_\_\_ an audio control for controlling the reproduction of said audio sum at said first participant's workstation such that the composition of the audio originating from each of the second and third participants reproduced at each speaker is dependent on a position of the images of the second and third participant in said reproduced mosaic image.

192. The teleconferencing system of claim 191, further comprising an echo canceller to reduce echo during the reproduction of said audio sum.

193. The teleconferencing system of claim 187, wherein said first and second networks employ physically separate paths.

194. The teleconferencing system of claim 55, wherein said first and second networks employ physically separate paths.

195. (Once Amended) The teleconferencing system of claim 65, wherein the AV reproduction capabilities of at least the workstation of the first participant includes a plurality of speakers, the system further comprising:

~~195.~~ (a.) \_\_\_\_\_ an audio control for controlling the reproduction of said audio sum at said first participant's workstation such that the composition of the audio originating from each of the second and third participants reproduced at each speaker is dependent on a position of the images of the second and third participant in said reproduced mosaic image.

196. (Once Amended) [The] A method of conducting a teleconference among a plurality of participants having workstations with associated monitors for displaying visual images, and with associated AV capture and reproduction capabilities for capturing and reproducing video images and spoken audio of the participants, the workstations being interconnected by a first network, the network providing a data path for carrying digital data signals among the workstations, the method comprising the steps of:

- 4/5
- (a) moving AV signals representing video images and spoken audio of the participants, along an AV path [connecting] between the workstation of a first participant at a first location [to] and the workstation of a second participant at a second location via a third location;
  - (b) compressing the AV signals [codecs in communication with the AV path];
  - (c) receiving the compressed signals at the third location; and
  - (d) routing the received AV signals to [a] the second location without decompressing the signals at the third location.
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197. The method of conducting a teleconference of claim 196, further comprising the steps of:

- (a) combining the captured images of a first and second participant into a mosaic image; and
  - (b) reproducing the mosaic image at at least one workstation.
- 

198. (Once Amended) The method of conducting a teleconference of claim 197, further comprising the steps of:

- 4/5
- (a) combining a portion of the mosaic image with a captured image of another of the participants to generate a composite mosaic image [of the captured images of the participants]; and

(b) reproducing the composite mosaic image at the workstation of at least one of the participants.

199. (Once Amended) The method of conducting a teleconference of claim 196, further comprising the steps of:

- (a) receiving the captured audio of a first, second and third participant;
- (b) combining the received audio of only the second and third participants into an audio sum; and
- (c) reproducing the audio sum at the workstation of the first participant.

200. The method of claim 196 further comprising the steps of:

- (a) routing at least the AV signals among participant's workstations in such a way so as to optimize the carrying of AV signals between the workstations.

201. The method of claim 200 wherein the optimization is based on either the actual or the anticipated state of the AV path.

202. (Once Amended) The method of conducting a teleconference of claim 196, further comprising the steps of:

- (a) managing a data conference, during which data is shared among a plurality of [the] participants and displayed on the monitors of their respective workstations; and



(b) managing a videoconference, during which the video image and spoken audio of one [of the] participants [can be] are reproduced at the workstation of another [of the] participant[s], by utilizing a [the] data network operating system and a data network protocol of the first network.

203. (Once Amended) The method of conducting a teleconference of claim 202, further comprising the steps of:

(a) combining at least a portion of the [mosaic image with a captured image of a third participant to generate a distributed mosaic image of the] captured images of the first[,] and second [and third] participants into a mosaic image; and

(b) [for] reproducing the [distributed] mosaic image at at least one workstation.

204. (Once Amended) The method of conducting a teleconference of claim 203 further comprising the steps of:

(a) selecting the image of one of the participants in the [distributed] mosaic image;  
and

(b) replacing the [distributed] mosaic image with the image of the selected image.

205. (Once Amended) The method of conducting a teleconference of claim [202] 203, further comprising the steps of:

- [Handwritten: H/C]*
- (a) receiving [the] captured audio of [a] the first[,] and second [and third] participants and captured audio of a third participant;
- (b) combining the received audio of only the second and third participants into an audio sum; and
- (c) reproducing the audio sum at the workstation of the first participant.
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206. The method of conducting a teleconference of claim 205 wherein the AV reproduction capabilities of at least the workstation of the first participant includes a plurality of speakers, the method further comprising the steps of:

- (a) controlling the reproduction of the audio sum at the first participant's workstation such that the composition of the audio originating from each of the second and third participants reproduced at each speaker is dependent on a position of the images of the second and third participant in the reproduced mosaic image.

## REMARKS

### Introduction

This amendment is made after a meeting with the Examiner on September 5, 1996. The applicants, assignee and attorney of record thank the Examiner for his time and effort. This meeting was particularly helpful as it defined the main issue of this matter. This issue is discussed below: